AMENDMENT TO THE CLAIMS

1. (Previously Presented) A light scanning optical system comprising an incidence optical system for causing a beam emitted from light source means to be incident on a deflecting surface of a light deflector at a predetermined angle in a sub-scanning cross-section, and an imaging optical system for imaging the beam reflected and deflected by said light deflector on a surface to be scanned, wherein when a maximum value and a minimum value of a peak intensity in an effective scanning area of a spot imaged on said surface to be scanned by said imaging optical system are defined as E_{MAX} and E_{MIN}, respectively, the following condition is satisfied:

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$$0.8 \leq \frac{E_{MIN}}{E_{MAX}},$$

and wherein when a difference in an incidence point in a sub-scanning direction on said surface to be scanned between two marginal rays of the beam reflected and deflected by the deflecting surface of said light deflector in the main scanning direction is defined as Δs and a diameter of the spot imaged on said surface to be scanned which becomes $1/e^2$ relative to the peak intensity in the sub-scanning direction is defined as Ds, the following condition is satisfied:

$$\frac{\Delta s}{Ds} \leq 0.9.$$

T, 0690

2. (Canceled)

2 ~~3.~~ (Currently Amended) A light scanning optical system according to ~~Claim 2~~ Claim 1, wherein when a beam width of the beam reflected and deflected by the deflecting surface of said light deflector in the main scanning direction is defined as d and an angle of incidence at which the beam from said incidence optical system is incident on said deflecting surface from an oblique direction with respect to a plane containing a normal to the deflecting surface of said light deflector in the sub-scanning cross-section and parallel to the main scanning direction is defined as α and a scanning angle of the beam reflected and deflected by the deflecting surface of said light deflector is defined as θ and a lateral magnification of said imaging optical system in the sub-scanning direction is defined as β, the following condition is satisfied:

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$$\frac{2 \times d \times \tan\left(\frac{\theta}{2}\right) \times (\sin\alpha) \times \beta}{Ds} \leq 0.9.$$

3 ~~4.~~ (Currently Amended) A light scanning optical system according to ~~Claim 2~~ Claim 1, wherein an optical axis of at least one lens surface constituting said imaging optical system in the sub-scanning cross-section is shifted in the sub-scanning direction relative to a center axis of the beam reflected and deflected by said deflecting surface and travelling toward a central position of the effective scanning area or/and is inclined in the sub-scanning direction.

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4 ~~5~~. (Currently Amended) A light scanning optical system according to ~~Claim 2~~ Claim 1, wherein a height of an optical axis of a lens surface of at least one of a plurality of lenses constituting said imaging optical system in the sub-scanning cross-section continuously varies in conformity with a lengthwise position in the main scanning direction.

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5 ~~6~~. (Previously Presented) A light scanning optical system according to Claim 1, wherein at least one lens of a plurality of lenses constituting said imaging optical system also constitute said incidence optical system.

6 ~~7~~. (Previously Presented) A light scanning optical system according to Claim 1, wherein the beam emitted from said light source means is incident on the deflecting surface of said light deflector in a state in which it is wider than a width of said deflecting surface in a main scanning direction.

7 ~~8~~. (Previously Presented) A light scanning optical system according to Claim 1, wherein the beam emitted from said light source means is incident on the deflecting surface from substantially the center of a scanning angle by said light deflector.

9. (Previously Presented) A light scanning optical system comprising an incidence optical system for causing a beam emitted from light source means to be incident on a deflecting surface of a light deflector at a predetermined angle in a sub-scanning

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cross-section, and an imaging optical system for imaging the beam reflected and deflected by said light deflector on a surface to be scanned, wherein when a maximum value and a minimum value of a peak intensity in an effective scanning area of a spot imaged on said surface to be scanned by said imaging optical system are defined as E_{MAX} and E_{MIN}, respectively, the following condition is satisfied:

$$0.8 \leq \frac{E_{MIN}}{E_{MAX}},$$

E1 T, 9000

wherein a lens surface of at least one lens of a plurality of lenses constituting said imaging optical system has its radius of curvature in the sub-scanning cross-section continuously varied away from an optical axis of the lens surface in a main scanning direction.

~~10~~ 8. (Original) A light scanning optical system according to Claim 1, wherein said light source means is a multibeam laser source having a plurality of light emitting portions.

~~11~~ 10. (Currently Amended) An optical scanning apparatus characterized by using a light scanning optical system according to any one of Claims 1 ~~to 10~~ and 3 to ~~10~~ 9.

~~12~~ 11. (Original) An image forming apparatus provided with an optical scanning apparatus according to Claim ~~11~~ 10, and a printer controller for converting code data inputted from an external device into an image signal and inputting it to said optical scanning apparatus.

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~~13~~. (Original) An image forming apparatus according to Claim ~~12~~ 11, wherein an image is formed by background exposure.

14\. to 25. (Canceled)

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~~26~~. (Previously Presented) A light scanning optical system in which a beam emitted from light source means is caused by an incidence optical system to be incident on a first deflecting surface of a light deflector having a plurality of deflecting surfaces at a predetermined angle in a sub-scanning cross-section, and the beam reflected and deflected by said first deflecting surface is caused to be again incident on a second deflecting surface of said light deflector differing from said first deflecting surface through a transmitting optical system, and the beam reflected and deflected by said second deflecting surface is imaged on a surface to be scanned by an imaging optical system, and in the sub-scanning cross-section, wherein when a maximum value and a minimum value of a peak intensity in an effective scanning area of a spot imaged on said surface to be scanned by said imaging optical system are defined as E_{MAX} and E_{MIN}, respectively, the following condition is satisfied:

T, 0760

$$0.8 \le \frac{E_{MIN}}{E_{MAX}}.$$

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~~27~~. (Previously Presented) A light scanning optical system according to Claim ~~26~~ 13, wherein when a difference in an incidence point in a sub-scanning direction on

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said surface to be scanned between two marginal rays of the beam reflected and deflected by the second deflecting surface of said light deflector in a main scanning direction is defined as Δs and a diameter of the spot imaged on said surface to be scanned which becomes $1/e^2$ relative to the peak intensity in the sub-scanning direction is defined as Ds, the following condition is satisfied:

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T,0720 $$\frac{\Delta s}{Ds} \leq 0.9.$$

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14 ~~28~~. (Previously Presented) A light scanning optical system according to Claim ~~27~~, wherein when a beam width of the beam reflected and deflected by the second deflecting surface of said light deflector in the main scanning direction is defined as d and an angle of incidence at which the beam from said incidence optical system is incident on said first deflecting surface from an oblique direction with respect to a plane containing a normal to the first deflecting surface of said light deflector in the sub-scanning cross-section and parallel to the main scanning direction is defined as α and a scanning angle of the beam reflected and deflected by the second deflecting surface of said light deflector is defined as θ and a lateral magnification of said imaging optical system in the sub-scanning direction is defined as β, the following condition is satisfied:

T,0730 $$\frac{2 \times d \times \tan\left(\frac{\theta}{2}\right) \times (\sin\alpha) \times \beta}{Ds} \leq 0.9.$$

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14 ~~29~~. (Previously Presented) A light scanning optical system according to Claim ~~27~~, wherein an optical axis of a lens surface of at least one of a plurality of lenses constituting said imaging optical system in the sub-scanning cross-section is shifted in the sub-scanning direction relative to a center axis of the beam reflected and deflected by said deflecting surface and travelling toward a central position of the effective scanning area or/and is inclined in the sub-scanning direction.

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14 ~~30~~. (Previously Presented) A light scanning optical system according to Claim ~~27~~, wherein a height of an optical axis of a lens surface of at least one of a plurality of lenses constituting said imaging optical system in the sub-scanning cross-section continuously varies in conformity with a lengthwise position in the main scanning direction.

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13 ~~31~~. (Previously Presented) A light scanning optical system according to Claim ~~26~~, wherein at least one lens of a plurality of lenses constituting said imaging optical system also constitute said incidence optical system.

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13 ~~32~~. (Previously Presented) A light scanning optical system according to Claim ~~26~~, wherein the beam emitted from said light source means is incident on the first deflecting surface of said light deflector in a state in which it is wider than a width of said first deflecting surface in a main scanning direction.

13 20 ~~33.~~ (Previously Presented) A light scanning optical system according to Claim ~~26,~~ wherein the beam emitted from said light source means is incident on the first deflecting surface from substantially the center of a scanning angle by said light deflector.

13 21 ~~34.~~ (Previously Presented) A light scanning optical system according to Claim ~~26,~~ wherein a lens surface of at least one of a plurality of lenses constituting said imaging optical system has its radius of curvature in the sub-scanning cross-section continuously varied away from an optical axis of the lens surface in a main scanning direction.

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22 ~~35.~~ (Original) A light scanning optical system according to Claim ~~26,~~ 13 wherein said light source means is a multibeam laser source having a plurality of light emitting portions.

23 ~~36.~~ (Original) An optical scanning apparatus characterized by using a light scanning optical system according to any one of Claims ~~26~~ 13 to ~~35.~~ 22

24 ~~37.~~ (Original) An image forming apparatus provided with an optical scanning apparatus according to Claim ~~36,~~ 23 and a printer controller for converting code data inputted from an external device into an image signal and inputting it to said optical scanning apparatus.

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25 ~~38.~~ (Original) An image forming apparatus according to Claim 24 ~~37~~, wherein an image is formed by background exposure.

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